

CLAIMS

1. A process for the continuous "in situ" manufacturing of pumpable explosive mixtures, comprising:

- 5           a) transportation to place of manufacture of:
- (i) a non-explosive or low sensitivity matrix product that contains an aqueous solution or suspension of an oxidant salt, a thickening agent and, optionally, a combustible material and/or a sensitizer;
- 10           (ii) a stabilizing agent of air bubbles, and optionally
- (iii) an inorganic oxidant in granular form or a mixture of an oxidant and a combustible material, in granular form, and/or
- 15           (iv) a liquid combustible material;
- b) mixing said products (i), (ii), and, optionally, (iii) and/or (iv), in a tank that allows the mixture and capturing of atmospheric air in a controlled way, to obtain a pumpable explosive mixture with an oxygen balance of between -10% and +10%, with a density that may be adjusted and by controlling the amount of air that is incorporated into the said mixture; and
- 20           c) load the pumpable explosive mixture directly into the shot hole.
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2. Process according to claim 1, wherein the mixer is a rotating mixer.

3. Process according to claim 1, wherein during the loading of the shot hole, the pumpable explosive mixture

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is mixed with a reticulating agent.

4. Process according to claim 1, wherein said non-explosive or low sensitivity matrix is present in the mixture in proportions greater than 50% of the total weight.

5. Process according to claim 1, wherein said oxidant product in granular form is an inorganic nitrate.

6. Process according to claim 1, wherein said product (iii) is a mixture of inorganic nitrate in granular form and liquid combustible material.

7. Process according to claim 1, wherein the liquid combustible material is selected from the group formed by aromatic hydrocarbons, aliphatic hydrocarbons, oils, petroleum derivatives, derivatives of vegetable origin and mixtures thereof.

8. Process according to claim 1, wherein said stabilizing agent of air bubbles is selected from the group formed by solutions or suspensions of surfactants, proteins and natural polymers and their derivatives.

9. Process according to claim 1, wherein the mixture of the said products (i), (ii) and, optionally (iii) and/or (iv), is carried out in an installation assembled on a truck.